

CLAIMS:

1. An apparatus comprising a receiving device working with space diversity for signals modulated with spreading code coefficients in time and for signals received over at least two channels, the receiving device comprising a mixer circuit and a spreading code demodulation circuit in the form of demodulation branches which have code inputs, characterized in that the mixer circuit shifts the phase of the signals of one of the channels, whereas the code inputs of one of the branches receive the spreading code and the inputs of at least another branch receive the conjugate spreading code.

2. An apparatus as claimed in claim 1, characterized in that the received signals before being mixed are broken down into complex signals and in that the mixer circuit has a mixing input for reversing the imaginary part of one of the received signals.

3. An apparatus as claimed in claim 1 or 2, characterized in that a combining circuit is provided for combining the signals of the two branches.

4. A processing method for signals received over various channels, implemented in a system as claimed in one of the claims 1 to 3 and having been subjected to a time diversity via a spreading code formed by code elements which appear in a complex form, characterized in that it comprises the following steps:

- reception of signals over at least two channels,
- mixing of signals of each one of the channels by a local oscillator to reverse the phase of the signals of one of the channels,
- demodulation of the signals by means of a first demodulation branch which operates with said non-conjugate spreading code elements and at least a second demodulation branch operating with said conjugate code elements,
- combining signals supplied by the two branches to reconstruct the thus transmitted data.